

For objective preparation all exercises MCQs, all book tables or blocks are important.

Short Questions

Chapter#1

Definitions of all branches of biology.
 What are parasites?
 Write a note on Bu Ali Sina.
 Write a note Jabir Bin Hayan.
 Explain biomolecules.
 Differentiate between population and community.
 Define Biosphere level?
 Differentiate between cell level and tissue level.
 What are Bio-elements?
 What is species?
 Differentiate between vegetative and reproductive organs.
 Differentiate between macromolecules and macromolecules.
 Define organ.
 What is habitat?
 Define Biotechnology?
 What is science?
 Define fossils.
 What is mustard plant?
 What are the scientific names of mustard plant, human & frog?

Chapter#2

Define biological problem.
 What is Scientific method?
 What do you know about Plasmodium?
 What is biological method?
 Write the of steps of biological method.
 Differentiate between qualitative and quantitative observation.
 State characteristics of good hypothesis.
 State observations of A.F.A. King.
 Write the reasons behind the spreading of Dengue fever.
 Differentiate between Ratio and Proportion.
 Write a note on deduction.
 State Biological laws.
 State theory and law.
 Write a note on data organization.
 State the symbols behind dengue fever.
 What is the use of quinine?
 What is the hypothesis?
 Why Ronald Ross used sparrow in his experiment?
 Define the incubation period?
 Write the meaning of Word Malaria?
 Write the contributions of Laveran in the discovery of Plasmodium?

Chapter#3

What is the scientific name of Orchid Tree?
 Write the scientific name of Starfish?

Define mitosis.
 Define Kinetochore?
 What do you know about binary fission?
 Define inter kinesis?
 What is Telophase?
 Define Necrosis and its causes?
 Write the importance of G-1 phase.
 Write the information about regeneration?
 What do you know about Malignant and benign tumor?
 Differentiate between karyokinesis and cytokinesis.
 Define alternation of generations.
 Define Metastasis
 Differentiate between somatic cell and germ line cell?
 Define Meiosis.
 Define crossing over.
 What is meant by phragmoplast?
 Differentiate between apoptosis and necrosis.
 State S-Phase.
 What is mitotic spindle?
 State alternation of generation.
 Differentiate between somatic cells and germ cells.
 How does cytokinesis differ in plants and animal cells?

Chapter#6

What are cofactors of an enzyme.
 Define activation energy.
 Define anabolism. Is respiration catabolism? Who first used the enzymes term?
 Write the names of enzymes.
 Define substrate and product.
 What are the two industrial uses of the enzyme?
 Define metabolism.
 What are metabolic pathways?
 Define peptide bonds?
 Differentiate between prosthetic group and co – enzyme.
 What is active site?
 Define optimum temperature.
 Define induced fit model of enzymes.
 Define prosthetic group?

Chapter#7

Define oxidation and reduction.
 Define ATP.
 who discovered ATP?
 What do you know about Redox Reactions?
 What is the function of ATP in cell?
 Write down three sub unit of ATP?
 Who discovered dark reactions?

Why the two-kingdom classification system was rejected?
 Write the name of the national animal of Pakistan?
 What do you know about Mule?
 What do you know about the role of E- Chatton?
 Define pollution?
 What are the classifications of human beings?
 What is binomial?
 Define biodiversity.
 Explain importance of biodiversity.
 Define classification.
 What are the aim of classification?
 Define taxonomic Hierarchy and Taxon.
 What are the bases of five kingdom system?
 Define Species.
 State Binomial nomenclature with method.
 Differentiate between taxonomy and systematics?
 Differentiate between flora and fauna.
 Write down the names of all kingdoms.
 Write characteristics of Kingdom Monera.
 How fungi differ from other plants?
 What are endangered Species?
 Differentiate between extinct and endangered species.
 What is deforestation?
 State Kingdom Fungi.
 State Kingdom Plantae.
 State kingdom Monera.
 Differentiate between prions and viroid's.
Chapter#4
 Define micrograph.
 What do you know about Resolving Power?
 What do you know about SER and RER?
 Write the definition of Microscopy?
 Differentiate between magnification and resolution.
 What do you know about the chromosome?
 What do you know about organelles?
 Write principles of cell theory.
 Define tonicity?
 Differentiate between primary wall and secondary wall?
 What is plasmodesmata? Where are these found in cell?
 Differentiate between Prokaryotic cell and Eukaryotic cell.
 Describe the work of Mathias Schiolden and Theodor Schwann in cell theory.
 State functions of cell membrane.
 Draw the diagram of mitochondria and label it.
 State functions of lysosomes.
 What do you know about TEM and SEM?
 What is fluid mosaic model?
 What is meant by thylakoids?

What is meant energy currency of a cell?
 What is Bioenergetics?
 What is Photosynthesis with chemical equation?
 Who discovered the Krebs cycle?
 Define Respiration.
 What is limiting factor?
 State cellular respiration.
 Differentiate between aerobic and anaerobic respiration.
 Write down the difference between light and dark reactions?
 Define alcoholic fermentation.
 What do you know about pigments?
 What are Anaerobes?
 Define glycolysis.
Chapter#8
 Define Nutrition.
 Write the weight and size of the liver in an adult human?
 What are lipids. Write any two types?
 What are the source of lipids?
 Differentiate between organic and inorganic fertilizer.
 Differentiate between saturated and unsaturated fatty acids.
 What are the health risks if we take more saturated fatty acids in our diet?
 Differentiate between fat soluble and water soluble vitamins.
 Differentiate between major mineral and trace mineral?
 What is night blindness?
 What is WFP?
 What is the role of iron in human body?
 Define Mastication.
 What is Eutrophication?
 Differentiate between soluble and insoluble dietary fibers.
 What is Malnutrition?
 Write the names about the components of human food?
 How the efficiency of vitamin A causes blindness?
 Define dietary fibers?
 Differentiate between assimilation and absorption?
 Which foods are sources of calcium?
 Define appendix?
 What do you know about Famine?
 Define OIN?
 Differentiate between bolus and chime?
 Write down the source of vitamin C.
 Define Goiter and its causes?
 Write the causes of ulcer.
 What are macronutrients?

What is the chemical composition of the cell wall?
 Define reverse osmosis.
 Differentiate between diffusion and osmosis.
 Differentiate between hypertonic and hypotonic solutions.
 Define endocytosis.
 Differentiate between endocytosis and exocytosis.
 Define sclerenchyma tissues?
 State functions performed by cytoplasm.
 What are function of leucoplasts and chromoplasts?
 What is active transport?
 Differentiate between diffusion and facilitated diffusion?
 Describe the structure and function of Golgi apparatus and lysosomes.
Chapter#5
 Define cell cycle.
 Differentiate between chromatin and chromosome.
 Name two major phase of cell cycle.
 What is G₀ Phase?

Define Balanced diet.
 What are the functions of the large intestine?
 Why we use calcium?
 What is scurvy?
 Define fertilizers
Chapter#9
 What is the role of xylem and phloem tissue in plants life?
 State the function of root in plant.
 What is wind?
 Differentiate between source and sink.
 Define pressure flow mechanism
 What is the function of stomata in plants.
 Define blood.
 What is the function of root hair?
 Define pus.
 What is transpiration pull?
 What is systemic circulation?
 Explain briefly stomatal transpiration.
 Define Serum.
 What is cohesion tension theory?
 State universal donors.
 What is meant by lenticels. Write its importance.
 Define universal recipients.

Long Questions

Chapter#1
 Explain the professions adopted after biological studies?
 Explain the carriers in biology.
 Explain population and community levels
 Explain unicellular, multicellular and colonial organization.
 Explain organ system level.
Chapter#2
 Explain steps involved in biological method.
Chapter#3
 Explain the significance of binomial nomenclature.
 Explain three types of kingdoms.
Chapter#4
 Draw diagrams of animal and plant cell and label it.
 Explain plastids with types.
 Define the types of tissues in plants.
Chapter#5
 Explain interphase during cell cycle.
 Explain mitosis. Or Explain meiosis.
 Explain apoptosis and necrosis.
Chapter#6
 Explain characteristics of enzyme.
 State mechanism of enzyme action

Chapter#7
 What is ATP structure? Briefly explain it.
 Draw a diagram of Z-Scheme.
 Write the mechanism of photosynthesis.
 How energy is released during oxidation reduction reactions in living organisms.
 Write the mechanism of respiration.
Chapter#8
 Explain the importance of fertilizers.
 Explain minerals deficiency diseases.
 State the functions of Liver.
 Detail note on Vitamins?
Chapter#9
 What do you know about composition of blood?
 Also give their disorders?
 Discuss ABO blood group system.
 Give the anatomy of human heart?
 State and explain blood groups?
 Explain structure and function of arteries and veins.
 Discuss human blood circulatory system?
 Write detail note on blood vessels?

9th Class Biology Guess 2023 PTB
9th Biology Expected Paper Scheme PTB

Objective

Chapter	MCQs	Chapter	MCQs	Chapter	MCQs
1	2	4	1	7	1
2	1	5	2	8	1
3	1	6	2	9	1

Short Questions

Chapter	Short Questions	Chapter	Short Questions	Chapter	Short Questions
1	3	4	3	7	2
2	2	5	4	8	2
3	2	6	3	9	2

Long Questions

Chapter	Long Questions	Chapter	Long Questions	Chapter	Long Questions
1	Q#5 (a)	3	Q#6 (a)	8	Q#7 (a)
4	Q#5 (b)	7	Q#6 (b)	9	Q#7 (b)